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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/694,029	10/28/2003	Nam-II Cho	1572.1154	3878

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EXAMINER

STERLING, AMY JO

ART UNIT	PAPER NUMBER
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3632

DATE MAILED: 12/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/694,029

Applicant(s)

CHO ET AL.

Examiner

Amy J. Sterling

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 November 2004.
2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
4a) Of the above claim(s) 24-28 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-5, 7, 13-22, 29 and 32-41 is/are rejected.
7) ☒ Claim(s) 6, 8-12, 23, 30 and 31 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 14 January 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10/28/03, 11/18/04.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This is the first Office Action for application number 10/694,029 Display Apparatus, filed on 10/28/03. Claims 1-41 are pending.

Election/Restrictions

Claims 24-28 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected Species II, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 11/1/04.

Applicant's election with traverse of the restriction/election in the reply filed on 11/1/04 is acknowledged. The traversal is on the ground(s) that the claims are directed in the same technology and are closely related and that the search would not provide an undue burden. This is not persuasive because the tilting hinge (60) as shown by Fig. 3 does not contain a connecting tab and the tilting hinge (60a) as shown by Fig. 10, contains a connecting tab, which is clearly patentably distinct and creates a burdensome search.

The requirement is still deemed proper and is therefore made FINAL.

Information Disclosure Statement

The information disclosure statement submitted on 10/28/04 and 11/18/04 in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement has been considered by the examiner.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "circular arc being approximately 180 degrees or greater" of claims 14 and 15, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

Claim 32 is objected to because of the following informalities: The claims repeats the limitation of "the tilting bracket has two ends, each comprising a bolt accommodating part" twice, which seems to be a typographical error. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 33 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 33 is unclear because it recites, " a second friction force" which seems to indicate that there is a first friction force, which has not previously been recited. This renders the claim indefinite, the first friction force being undefined.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, 7, 13, 18, 21, 22, 29, 39 and 40 are rejected under 35 U.S.C. 102(b) as being anticipated by United States Patent No. 6189842 to Bergeron Gull et al.

The patent to Bergeron Gull et al. discloses a display apparatus (100), that includes a display body (102), a stand (108) and an hinge assembly (200), located between the display body and the stand, the hinge assembly (200) rotating the display body about first, second and third perpendicular axis (See Fig. 1, 112, 114 and 116 indicate rotation of the display device). Bergeron Gull et al. teaches that the hinge assembly has a pivoting hinge (200, See Fig. 2a) which pivots the display body about a first axis which is perpendicular to the display body and pivots the display body relative to the stand (108) and is provided between the display body and the tilting hinge. Bergeron Gull et al. teaches that the hinge assembly has a swiveling hinge (250) that rotates the display body about a second axis which is perpendicular to the stand and swivels the display body relative to the stand, and is provided between the tilting hinge (200) and the stand (108), and a tilting hinge which tilts (200, See Fig. 2b) the display body around an axis which is perpendicular to the first and second axis and tilts the display body relative to the stand (108) and is provided between the display body (102) and the stand (108). Bergerson Gull et al. also discloses wherein the pivoting hinge (200) has a pivoting bracket (204) engaged to the display body and a brass or plastic (See Col. 5, lines 60 and 61 for material selection) pivoting support bracket (208, 218) that rotationally engages the pivoting bracket (204) and engages the tilting hinge and a pivot shaft (214) which projects from the pivoting bracket toward the pivoting support bracket. Bergeron Gull et al. shows a ball flange (206) located eccentrically from a

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pivoting axis and a ball guide part in the shape of a circular arc (See Drawing Below) having a predetermined angle including a 90 degree angle, recessed from the surface of the pivoting bracket, wherein the location of the ball guide part corresponds to the ball flange.

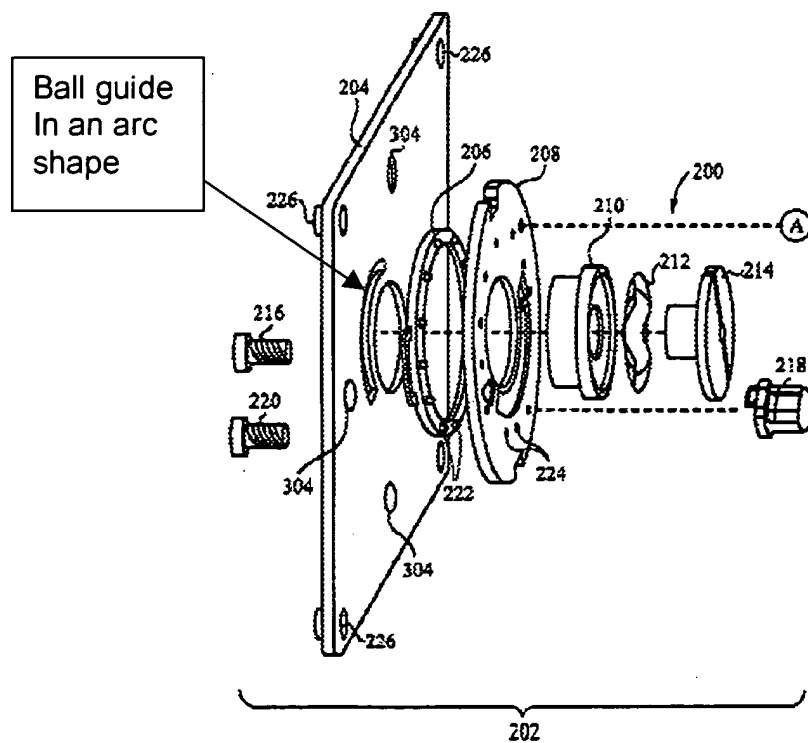
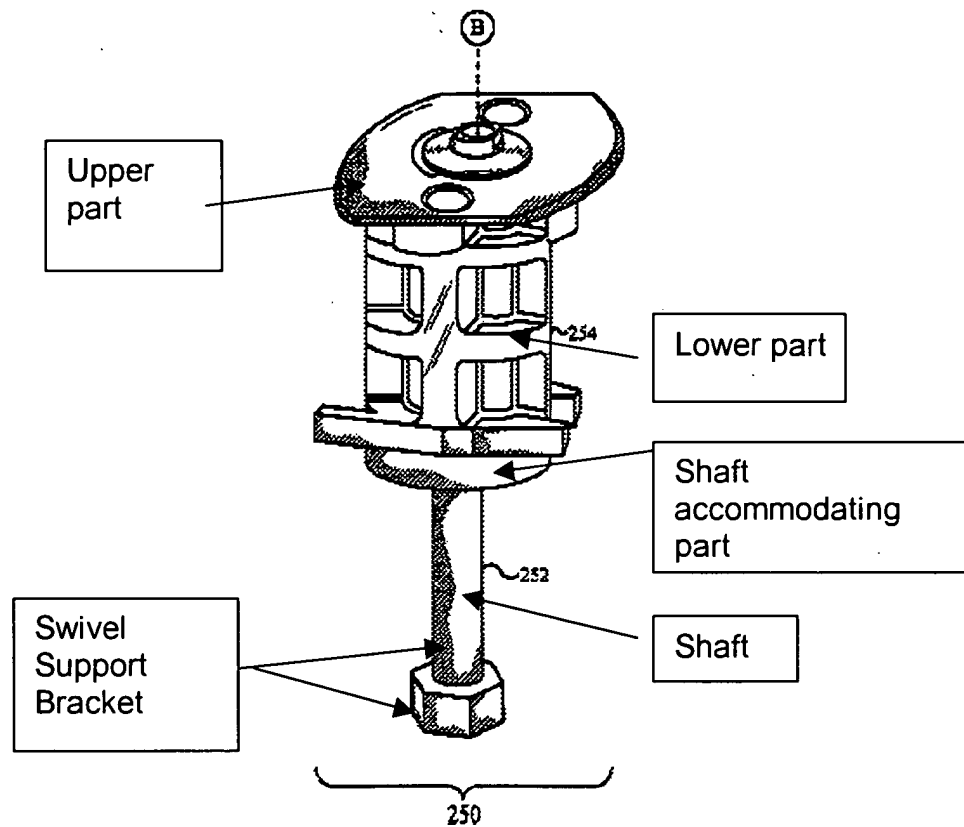


Fig. 2a

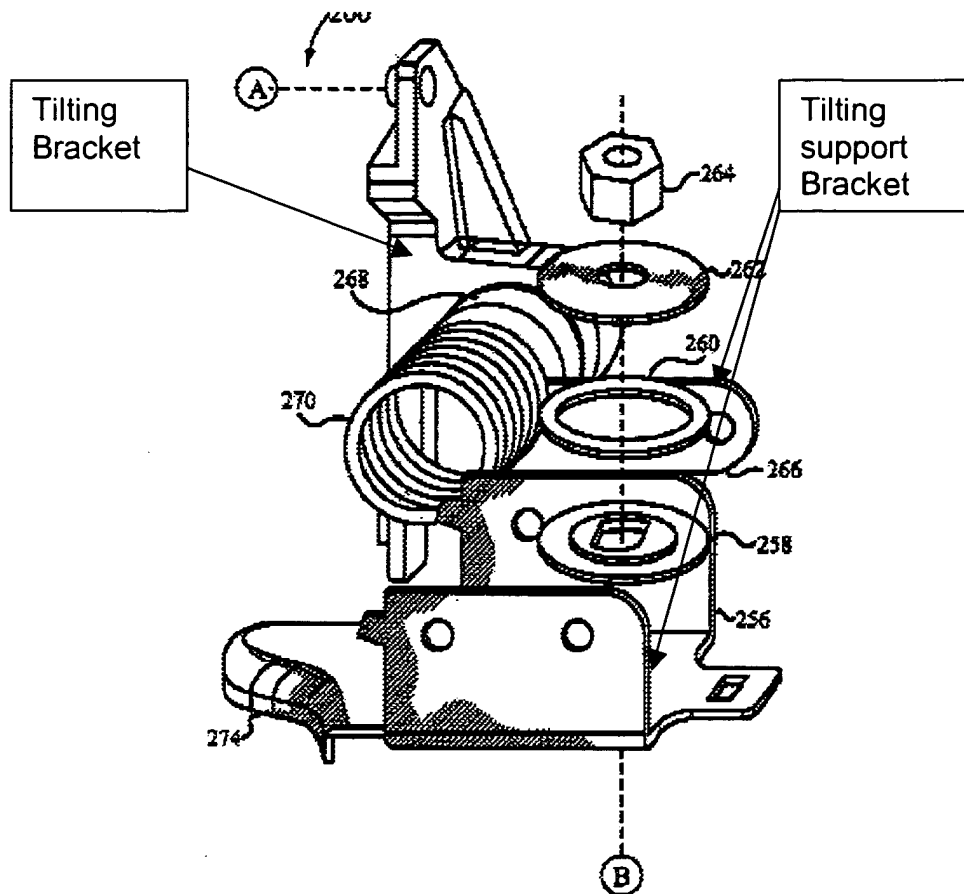
Bergeron Gull et al. discloses wherein the swiveling hinge (250, See Fig. 2c) has a swiveling support bracket (252) which is engaged to the stand and a swiveling bracket which has a lower part (254) swivelably engaged with the swiveling support bracket and an upper part (See Drawing Below) engaged with the tilting hinge, the swivel hinge

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having a swiveling shaft that projects from the swiveling support bracket toward the swiveling bracket and the swiveling bracket has a shaft accommodating part into which the shaft is inserted.

*Fig. 2c*

Bergeron Gull et al. also teaches that the tilting hinge (200, See Fig. 2b) has a tilting support bracket (256, 266) having a lower part (256) engaged with the swiveling hinge and a tilting bracket (See Drawing Below) engaged with the pivot hinge and rotationally engaged to the tilting support bracket.



Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent No. 6189842 to Bergeron Gull et al. as applied to claims 1, 2 and 7 above and further in view of United States Patent No. 5997493 to Young.

Bergeron Gull et al. discloses applicant's basic inventive concept, all the elements which are shown above with the exception that it does not show specifically that the circular arc may be approximately 180 degrees or greater.

Young shows a hinge, which has an arcuate slot (1038) which is 180 degrees or greater, used so that the rotation of the hinge may rotate through 180 degrees or greater. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made from the teachings of Young to have extended the slot to 180 degrees or greater in order for the device to rotate a greater number of degrees.

Claims 16, 17 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent No. 6189842 to Bergeron Gull et al. as applied to claims 1 and 2 above and further in view of United States Patent Publication No. 2003/0075653 to Li.

Bergeron Gull et al. discloses applicant's basic inventive concept, all the elements which are shown above with the exception that it does not specifically teach a body bracket detachably engaged to a rear of the display body and engaged to the pivoting bracket, wherein there are first screw holes on the display body and a second set of screw holes on the body bracket and the screw holes are arrayed in accordance with a video electronics Standard Association Flat Display Mounting Interface standard.

Li teaches a display device (28) which has a pivoting hinge (27) and a body bracket (unmarked) detachably engaged to a rear of the display body (28) and engaged to the pivoting bracket (27), wherein the display body has a first set of screw holes (See Page 2, paragraph 0022, for description of holes) and the body bracket has a second

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set of screw holes (272) which are designed according to International Standards for Flat Screen use (See page 2, paragraph 0022), used for attaching the display device to the pivoting hinge. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made from the teachings of Li to have added a body bracket and display with the screw holes in order to attach the display to the device.

Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent No. 6189842 to Bergeron Gull et al. as applied to claim 18 above.

Bergeron Gull et al. shows the basic inventive concept including that the some material used are brass and plastic (See Col. 5, lines 60 and 61 for material selection). Bergeron Gull et al. does not specifically state that the swivel bracket or the swiveling support bracket are made from plastic or brass. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have made all parts of the device out of any suitable material, including plastic and brass for their durability and strength properties.

Claims 32-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent No. 6189842 to Bergeron Gull et al. as applied to claims 1 and 29 and further in view of United States Patent No. 6164611 to Kuhnke.

Bergeron Gull et al. shows the basic inventive concept as shown above including showing a tilting bracket (256, 266, See Fig 2b, note that only one side of the bracket is shown for simplicity, but that the teaching includes two sides as shown by Fig. 4) with

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two ends (266), each having a bolt accommodating part (See Fig. 4 Below, See Col. 4 lines 39-51 for explanation of hinge) wherein the tilting bracket engages the tilting support bracket, the bolt accommodating parts align and an axle (268) passes through the bolt accommodating parts and a spring (270) giving a friction force between the tilting bracket and the tilting support bracket to secure the tilting bracket and the tilting support bracket together and rotate the display around the axle.

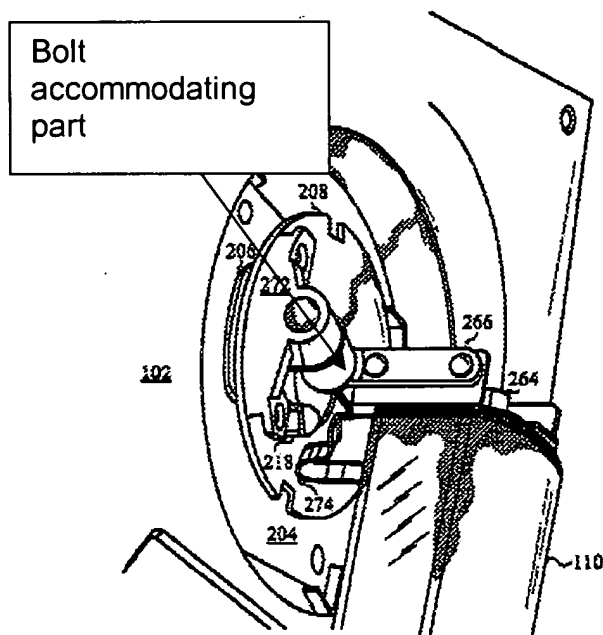


Fig. 4

Bergeron Gull et al. does not show wherein the axle is a screw bolt and nut.

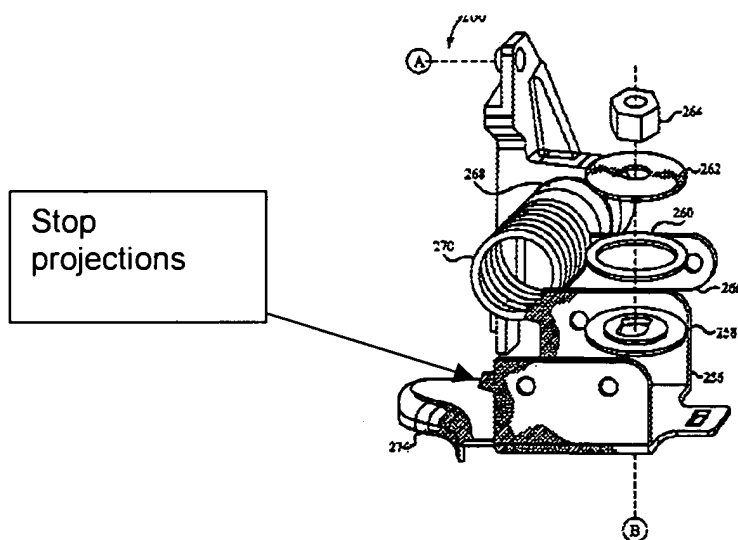
Kuhnke teaches a tilting bracket which has a lower tilting support bracket (16) and a tilting bracket (18) and opposed bolt accommodating parts (holes in 18), which receive screw bolts and nuts (19 screws, nuts unmarked) which are used to adjust the

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friction force between the tilting bracket and the lower tilting support bracket (16) and are used as a pivot axle. Therefore it would have been obvious to one of ordinary skill in the art to by the teachings of Kuhnke have replaced the axles of Bergeron Gull et al. with a screw bolt and nut, in order to have an adjustable friction in a pivot axle.

Claims 35-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent No. 6189842 to Bergeron Gull et al. and in view of United States Patent No. 6164611 to Kuhnke as applied to claims 1, 29 and 32 and further in view of United States Patent No. 6347433 to Novin et al.

Bergeron Gull et al. and Kuhnke show the basic inventive concept as shown above and including that the tilting support bracket has a projection (See Drawing Below) for limiting the angle of the display, but they do not specifically show that the tilting bracket has a pair of stoppers each stopper having a face and a predetermined angle is formed between the faces, the projection being accommodated between the faces.



Novin et al. teaches a tilt bracket which has a tilt support bracket (30, 62) and a tilting bracket (76, 86) which has a pair of stoppers with faces (96) having a predetermined angle between the faces, on the tilting bracket and a pair of projections (43) which are on the tilting support bracket, the projections being accommodated between the faces, used in order to limit the tilting rotation of the bracket, the rotation limit being adjustable by adjusting the size of the tilting projection or the predetermined angle formed between the faces. Therefore it would have been obvious to one of ordinary skill in the art to by the teachings of Novin et al. to have had a stopper and projection configuration in order to limit the amount of tilt rotation for the display.

Allowable Subject Matter

Claims 6, 8-12, 23, 30 and 31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art does show that the pivoting hinge includes a first snap ring engaged to a tapered end part of the pivoting shaft forcing the support bracket toward the pivoting bracket with a force that is proportional to the taper of the tapered end of the shaft. The prior art also does not show a coil spring which pushes a ball of the ball guide toward the ball guide part using an elastic force or a second snap ring engaged to a tapered end part of the swiveling shaft, with a that is proportional to the taper part of the shaft and a snap ring for the tilting bracket with a snap ring accommodating part.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following documents show various display apparatus

2002/0011544 to Bosson

6708940 to Ligertwood

6394403 to Hung

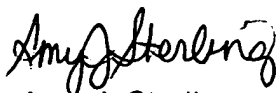
6189850 to Liao et al.

5941493 to Cheng

5335142 to Anderson

Any inquiry concerning this communication should be directed to Amy J. Sterling at telephone number 703-308-3271. The examiner can normally be reached (M-F 8 a.m.-5:00 p.m.). If attempts to reach the examiner are unsuccessful, the examiner's supervisor, Leslie Braun can be reached at 703-308-2156. The fax machine number for the Technology center is 703-872-9306 (formal amendments) or 703-308-3519 (informal amendments/communications).

Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center receptionist at 703-308-2168.


Amy J. Sterling
12/27/04